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10/565,200	07/26/2006	Jingwei Zhang	284467US2PCT	9279
22850	7590	09/05/2008		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER A. MINH D				
ART UNIT		PAPER NUMBER		
2821				
NOTIFICATION DATE		DELIVERY MODE		
09/05/2008		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/565,200

Applicant(s)

ZHANG ET AL.

Examiner

MINH D. A

Art Unit

2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 18-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SG/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Applicant's communication filed on 5/13/08 has been carefully considered by the examiner. The arguments advanced therein are persuasive with respect to the rejections of record, and those rejections are accordingly withdrawn. In view of a further search, however, a new rejection is set forth below. This action is not made final.

Claim Rejections - 35 USC § 102

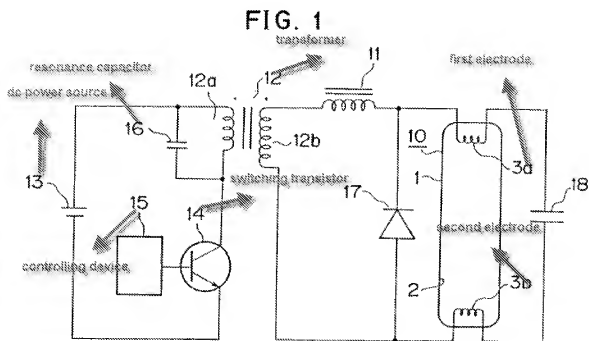
1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 18-21, 24-25 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Sakurai et al (U.S Patent No: 5,072, 155).

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Regarding claim 21, Sakurai discloses in figure 1 above that, an electrical supply device configured to deliver energy to a structure that includes at least first and second electrodes(3a,3b) and a space containing a gas to be excited(col.8, lines 9-13), the device comprising: a voltage generator (DC voltage (13)); an inductor in the form of a transformer (12) provided with a primary winding and with a secondary winding, the primary winding connected to the voltage generator(13) and the secondary winding connected to the first and second electrodes(3a,3b) to supply the first and second electrodes with a periodic voltage of a frequency(the switching element (14) for

conducting state and non-conducting state and each pulse having 20 KHz frequency, col.7, 25-30); and resonance means(resonance capacitor (16), switching element (14), controlling device (15) , and another devices in figure 1,col.7,lines 15-43) for fixing the frequency(20Khz, col.7, lines 26-28) at substantially the resonant frequency of the system of the structure(two electrodes with excited gas for structure) and the inductor(transformer(12)); wherein the resonance means (resonance capacitor (16), switching element (14), controlling device (15) , and another devices in figure 1) comprises a switch(14) placed in a path from the voltage generator (13) to the primary winding of the transformer(12), and a control system(controlling device(15)) connected to the switch(14) to open and close the switch(14) over a period, wherein closing of the switch, which is closed for a duration(col.13, 14-26), switching element (45) is connected between electrode (3a and 3b) and cut off duration while current flows through the negative electrode), is triggered by choice at one of the following instants(**for example on figures 17 or 18**, disclose a structure(first electrode and second electrode) and switching device such as (45) in figure 17 or switching device (67)in figure 18 for turn on/off current (zero current) flow to discharge lamp(30 or 50): at a zero crossing of the current flowing through the structure (two electrodes (33a, 33b); when the current flowing through the structure crosses a threshold current.(the switching (45) is connection to two electrodes and pulse signal for close in each cycle and in a duration which dependent upon a cycle and a pulse width of a pulse of a pulse signal form the pulse single source (46)(Col.13, lines 13-26).

Regarding claim 18, Sakurai discloses in figure 1 above that, wherein the voltage is at least partly sinusoidal (half-wave rectified Ac voltage of the sinusoidal waveform, col.4, lines 54-60).

Regarding claim 19, Sakurai discloses in figure 2 above that, comprising means for truncating the voltage (switching element (14)) for turn off the voltage flow to discharge lamp).

Regarding claim 20 , Sakurai discloses in figure 1 above that: wherein the resonance means is configured to operate for a plurality of resonant frequencies(frequency with varied among 5Khz, 20 Khz and 80Khz, col.8, lines 45-53).

Regarding claim 24, Sakurai discloses all of claimed subject matter as recited in claim 21, wherein the duration of the time during which the switch is closed is adjusted according to energy to be delivered to the structure (first electrode and second electrode(3a,3b))(col.13, 14-26).

Regarding claim 25, Sakurai discloses in figure 1 above that, wherein frequency is between 10 and 300 kHz (since the gas discharge lamp is operated about 200 Khz, col.7, lines 25-30.

Regarding claim 27, Sakurai discloses in figure 1, an assembly comprising: a structure that includes at least first and second electrodes (3a, 3b are excited with gas) and a space containing a gas.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over by Sakurai et al (U.S Patent No: 5,072, 155) in view of Coleman (Patent No: 6,011,704).

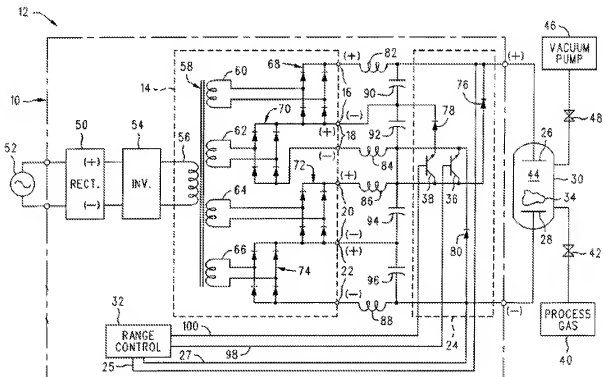


FIG. 1

Regarding claim 22, Sakurai et al disclose all of the claimed subject matter, as expressly recited in claim 21, except for means for measuring the current that delivers.

Coleman discloses f in figure 1 above that, a range control (32) for measuring the current flow to the plasma (43). Col. 10, lines 45-49.

It would have been obvious to one having ordinary skill in the art to employ the rang control for measuring current disclosed in the auto rang power supply of Coleman in the gas discharge lamp device of Sakurai et al to achieve the claimed invention. As disclosed in Reference of Coleman, the motivation for the combination would be to protect lamp ballast and would be to prevent the over current flow to the lamp.

5. Claims 26 and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Sakurai et al (U.S Patent No: 5,072, 155) in view of Yoshida et al (Pub No: 2002/0027412).

Regarding claims 26 and 29-30, Sakurai et al disclose all of the claimed subject matter, as expressly recited in claims 21 and 27 except for the figures 1-5 that, the gas discharge lamp comprising the first and second electrodes of the gas discharge lamp.

However, Sakurai et al do not disclose that, the gas discharge lamp having the structure forms a flat lamp for a backlight and for deposition system for plasma CVD process.

FIG. 6

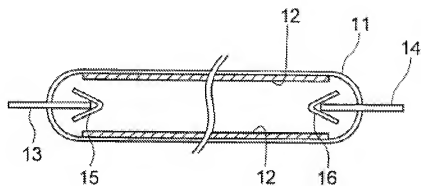
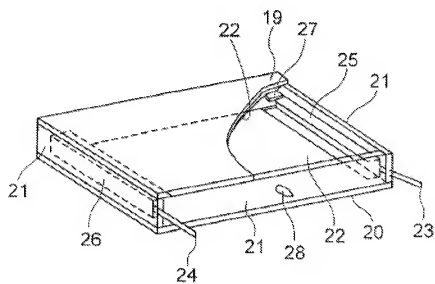


FIG. 7



Yoshida et al discloses in the figures 6-7 above that, the lamp circuit comprising the structure forms a flat lamp and for deposition system for plasma CVD process.

Paragraph [0056], line 1 and paragraph [0057], lines 9-10.

It would have been an obvious to one of ordinary skill in the art at the time the invention was made to employ the first and second electrodes of the structure forming the fiat lamp and for deposition system for plasma CVD process such as suggested by Yoshida in the lamp circuit of Sakurai et al in order to improve the backlight and improve to use in the fluorescent layer.

6. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over by Sakurai et al (U.S Patent No: 5,072, 155) in view of Lazarovich et al (Patent No: US: 6,685,803).

Regarding claim 28, Sakurai disclose all of the claimed subject matter, as expressly recited in claim 21 and 27, **except for** wherein the structure ((first and second electrode)(3a,3b)) includes two dielectrics associated respectively with the first and second electrodes and spaced apart so as to create the space.

Lazarovich et al disclose that, two dielectric layers (34, 36) are provide to electrode (30,32) and gas stream being to flow between dielectric layers (34, 36). Col.1, lines 44-53.

It would have been an obvious to one of ordinary skill in the art at the time the invention was made to employ the first and second dielectric layers (34, 36) disclosed in the plasma treatment of processing of Lanarovich et al in the gas discharge fluorescent lamp device in order to improve gas discharge lamp and for higher performance.

Citation of relevant prior art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Prior art Raiser et al (Pub. No: US 2002/0175629) discloses a method for starting a discharge lamp.

Prior art Okamoto et al (U.S. Patent No. 2002/0093295) discloses a light source device of a dielectric barrier discharge lamp.

Prior art Conrad et al (U.S. Patent No. 6,488,819) discloses a process and apparatus for chemical conversion.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh Dieu A whose telephone number is (571) 272-1817. The examiner can normally be reached on M-F (5:30 AM-2: 45 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Owens Douglas W can be reached on (571) 272-1662. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Examiner Minh A

Art Unit 2821

Date 8/30/08

/Douglas W Owens/
Supervisory Patent Examiner, Art Unit 2821